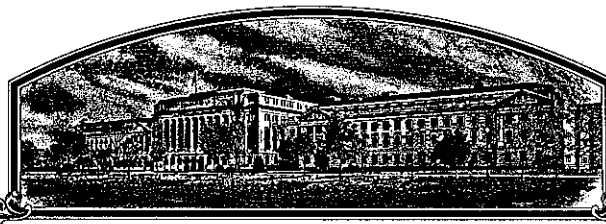


No.

8800172



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

W—U Research, Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE
Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *eighteen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT (T. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

ALFALFA

'Allstar'



Attest:

Kenneth H. Evans
Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

In Testimony Whereof, I have hereunto set
my hand and caused the seal of the Plant
Variety Protection Office to be affixed
at the City of Washington, D. C.
this 31st day of August in
the year of our Lord one thousand nine
hundred and eighty-eight.

Richard E. Lyng
Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

FORM APPROVED: OMB NO. 0581-0055

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions on reverse)

1. NAME OF APPLICANT(S) W-L Research, Inc.		2. TEMPORARY DESIGNATION 84-19	3. VARIETY NAME Allstar
4. ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code) 2000 Oak Street Bakersfield, CA 93301		5. PHONE (Include area code) (805) 327-4491	FOR OFFICIAL USE ONLY VPVO NUMBER 8800172
6. GENUS AND SPECIES NAME Medicago sativa L.	7. FAMILY NAME (Botanical) Leguminosae		FILING DATE June 10, 1988 TIME 9:30 <input checked="" type="checkbox"/> A.M. <input type="checkbox"/> P.M.
8. KIND NAME Alfalfa	9. DATE OF DETERMINATION Nov. 2, 1984		FEES RECEIVED AMOUNT FOR FILING \$ 1800 ⁰⁰ DATE June 10, 1988 AMOUNT FOR CERTIFICATE \$ 200 ⁰⁰ DATE July 21, 1988
10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION (Corporation, partnership, association, etc.) Corporation			12. DATE OF INCORPORATION Sept. 15, 1980 as amended
11. IF INCORPORATED, GIVE STATE OF INCORPORATION California			
13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS M. A. Peterson, Director of Research, W-L Research, Inc. 8701 Hwy. 14, Evansville, WI 53536-9593			

PHONE (Include area code): (608) 882-4100

14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED

a. ☒ Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)

b. ☒ Exhibit B, Novelty Statement.

c. ☒ Exhibit C, Objective Description of Variety (Request form from Plant Variety Protection Office.)

d. ☒ Exhibit D, Additional Description of Variety.

e. ☒ Exhibit E, Statement of the Basis of Applicant's Ownership.

15. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act.) ☐ Yes (If "Yes," answer items 16 and 17 below) ☒ No

16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? ☐ Yes ☐ No

17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED? ☐ Foundation ☐ Registered ☐ Certified

18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.? ☐ Yes (If "Yes," give date) ☒ No

19. HAS THE VARIETY BEEN RELEASED, OFFERED FOR SALE, OR MARKETING IN THE U.S. OR OTHER COUNTRIES? ☐ Yes (If "Yes," give names of countries and dates) ☒ No

20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

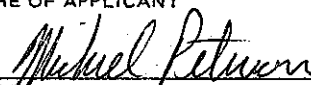
SIGNATURE OF APPLICANT 	DATE June 6, 1988
SIGNATURE OF APPLICANT	DATE 1

Exhibit AOrigin and Breeding History of Allstar

Allstar is a synthetic variety developed through three cycles of recurrent phenotypic selection within WL 316. In cycle one, WL 316 was sequentially screened for resistance to Phytophthora root rot and bacterial wilt. Seventy-six resistant selections were intercrossed. In cycle two, this population was screened a second time for resistance to Phytophthora root rot with 220 resistant selections intercrossed. In cycle three, this population was sequentially screened for resistance to stem nematode and verticillium wilt. One hundred-seventy resistant selections were intercrossed. These 170 plants were grown under cage isolation at Warden, WA in 1984 with seed harvested as breeder seed (Syn 1).

The original source material in Allstar traces predominately to Vertus, with lesser contributions from Team and Grimm.

Type and Frequency of Variants

No variants are recognized in Allstar beyond the limits given in Exhibit C.

Evidence of Uniformity and Stability

Allstar is stable in all essential and distinguishing characteristics during normal seed production. Allstar is as uniform as other alfalfa varieties previously accepted by state seed certifying programs.

Exhibit BNovelty Statement for Allstar

Allstar is a semi-dormant variety that possesses superior disease and insect resistance when compared to most varieties with similar fall growth characteristics. Allstar is most similar to WL 316 in growth type and appearance. However, Allstar is highly resistant to bacterial wilt (WL 316 = MR, Table 1), highly resistant to Fusarium wilt (WL 316 = R, Table 2), and highly resistant to phytophthora root rot (WL 316 = MR, Table 3). Allstar is also similar to G-2852. However, G-2852 is only resistant to Fusarium wilt (Table 2), resistant to phytophthora root rot (Table 3), and susceptible to spotted alfalfa aphid (Table 4). When compared to Commandor, Allstar is highly resistant to Fusarium wilt (Commandor = MR, Table 2), highly resistant to phytophthora root rot (Commandor = R, Table 3), and highly resistant to anthracnose (Commandor = R, Table 5). When compared to Garst 630, Allstar is highly resistant to phytophthora root rot (630 = R, Table 3), and highly resistant to anthracnose (630 = LR, Table 5).

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1> Bacterial Wilt Resistance -
Highland, MD

<u>Entry</u>	<u>% Resistance</u>	<u>A.S.I.</u>
Allstar (HR)	67	1.20
WL 316 (MR)	23	3.01
Vernal (R)	42	2.11
Narragansett (S)	0	4.14
LSD .05		0.44
CV %		13.1

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2> Fusarium Wilt Resistance -
Highland MD

<u>Entry</u>	<u>% Resistance</u>	<u>A.S.I.</u>
Allstar (HR)	71	1.22
WL 316 (R)	58	1.74
G-2852	49	2.14
Commandor (MR-R)	34	2.44
Agate (R)	55	1.80
MnGN-1 (S)	16	3.99
LSD (.05)	13	0.47
CV %		13.

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3> Phytophthora Root Rot Resistance -
Highland, MD

<u>Entry</u>	<u>% Resistance</u>
Allstar (HR)	64
G-2852 (R)	45
Commandor (R)	40
630 (R)	35
W1 316 (MR)	22
Agate (R)	41
Saranac (S)	2
LSD (.05)	11
CV %	24

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4> Spotted Alfalfa Aphid Resistance -
Bakersfield, CA

<u>Entry</u>	<u>% Resistance</u>	<u>A.S.I.</u>
Chief (R)	41	2.7
PRO-CUT (R)	39	2.8
Allstar (LR)	9	4.2
G-2852 (S)	4	4.3
Kanza (R)	36	3.0
Ranger (S)	0	4.9
LSD (.05)		0.3
CV %		17

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5> Anthracnose Resistance -
Highland, MD

<u>Entry</u>	<u>% Resistance</u>
Allstar (HR)	63
Commandor (R)	54
Chief (R)	44
PRO-CUT (MR-R)	27
630 (LR)	9
Saranac AR (R)	51
Saranac (S)	2
LSD (.05)	14
CV %	21

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK AND SEED DIVISION
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MARYLAND 20705OBJECTIVE DESCRIPTION OF VARIETY
ALFALFA (*Medicago sativa* sensu Gunn et al.)

NAME OF APPLICANT(S) W-L RESEARCH, INC.	TEMPORARY DESIGNATION 84-19	VARIETY NAME Allstar
ADDRESS (Street and No., or R.F.D. No., City, State, and Zip Code) 2000 Oak Street Bakersfield, CA 93301		FOR OFFICIAL USE ONLY PVPO NUMBER 8800172

PLEASE READ ALL INSTRUCTIONS CAREFULLY: Place numbers in the boxes to designate the expressions which are characteristic of the commercial generations of the application variety. Data for quantitative plant characters should be based on a minimum of 100 plants. Include leading zeros when necessary (e.g.,) for quantitative data. Comparative data should be determined from varieties entered in the same trial. Plant color may be precisely designated by using any recognized color chart, e.g., The Munsell Plant Tissue Color Charts.

1. WINTERHARDINESS:

CLASS:

- | | |
|--|--------------------------------------|
| 1 = Very Non-Winterhardy (CUF 101) | 2 = Non-Winterhardy (Moapa 69) |
| 3 = Intermediately Non-Winterhardy (Mesilla) | 4 = Semi-Winterhardy (Lahontan) |
| 5 = (Du Puits) | 6 = Moderately Winterhardy (Saranac) |
| 7 = (Ranger) | 8 = Winterhardy (Vernal) |
| 9 = Extremely Winterhardy (Norseman) | |

TEST LOCATION: Warden, WA

2. FALL DORMANCY:

FALL DORMANCY (DETERMINED FROM SPACED PLANTINGS)

TESTING INSTITUTION AND LOCATION	DATE OF LAST CUT	DATE REGROWTH SCORED	REGROWTH SCORE OR AVERAGE HEIGHT				LSD .05
			APPLICATION VARIETY	CHECK VARIETIES*			
				Saranac	WL 316	Dupuits	
W-L Research, Inc. Warden, WA	9/16/87	10/15/87	9.1	7.8	8.3	10.2	1.3

* CUF 101, Moapa 69, Mesilla, Lahontan, Du Puits, Saranac, Ranger, Vernal, or Norseman as appropriate.

Specify scoring system used: Height in inches from replicated space-plant nursery

Fall Growth Habit (Determined from Fall Dormancy Trials)

- | | | |
|----------------------------|--------------------------|----------------------------|
| 1 = Erect (CUF 101) | 3 = Semierect (Mesilla) | 5 = Intermediate (Saranac) |
| 7 = Semidecumbent (Vernal) | 9 = Decumbent (Norseman) | |

3. RECOVERY AFTER FIRST SPRING CUT (In Southwest, first cut after March 21):

- | | | | |
|--------------------------|--------------------|---------------------------|-------------------|
| 1 = Very Fast (CUF 101) | 3 = Fast (Saranac) | 5 = Intermediate (Ranger) | 7 = Slow (Vernal) |
| 9 = Very Slow (Norseman) | | | |

TEST LOCATION: Highland, MD

4. AREAS OF ADAPTATION IN U.S. (Where tested and proven adapted):

Primary Area of Adaptation

Other Areas of Adaptation

- | | | | |
|--|-------------------------------|---------------|------------------|
| 1 = North Central | 2 = East Central | 3 = Southeast | 4 = Southwest |
| 5 = Moderately Winterhardy Intermountain | 6 = Winterhardy Intermountain | | 7 = Great Plains |
| 8 = Other (Specify) _____ | | | |



5. FLOWERING DATE (When 10% of plants possess open flowers at time of first spring cut):

Days Earlier Than

Same As

1 = CUF 101

2 = Mesilla

3 = Saranac

4 = Vernal

5 = Norseman

Days Later Than

TEST LOCATION: Highland, MD

6. PLANT COLOR (Determined from healthy regrowth 3 weeks after first spring cut, controlling leafhoppers if necessary):

2 1 = Very Dark Green (524) 2 = Dark Green (Vernal) 3 = Light Green (Ranger) Munsell Co., Inc.
 COLOR CHART VALUE (Specify chart used; Munsell Color Charts, 1st edition 1952, Baltimore, MD):
 APPLICATION VARIETY: 5/6
 VERNAL: 5/6 (WL 315 = 4/4)
 TEST LOCATION: Highland, MD - Measurements taken June 10, leafhoppers controlled with insecticide

7. CROWN TYPE (Determined from spaced plantings):

2 Noncreeping Types: 1 = Broad (Vernal) 2 = Intermediate (Saranac) 3 = Narrow (CUF 101)
 Creeping Types: 4 = Creeping Rooted (Rangelander) 5 = Rhizomatous (Rhizoma)

8. FLOWER COLOR (Determine frequency of plants for each color class as defined by USDA Agricultural Handbook No. 424 (Barnes 1972), allowing all plants in plot to flower):

8 1 % Purple and Violet (Subclasses 1.1 to 1.4) 0 % Blue (Subclasses 2.3 and 2.4)
 1 5 % Variegated Other Than Blue (Subclasses 2.1, 2.2, 2.5 to 2.9) 2 % Yellow (Subclasses 4.1 to 4.4)
 2 % Cream (Class 3) 0 % White (Class 5)
 TEST LOCATION: Nampa, ID

9. POD SHAPE (Determine frequency of plants with the following pod shapes produced on well cross-pollinated racemes):

1 0 0 % Tightly Coiled (One or more coils, center more or less closed) % Loosely Coiled (One or more coils, center conspicuously open)
 % Sickle (Less than 1 coil) TEST LOCATION: Nampa, ID

10. PEST RESISTANCE: Provide in the appropriate column, trial data for application variety, and resistant (R) and susceptible (S) check varieties, synthetic generation tested, average severity index scores (ASI), least significant difference statistics (LSD .05), the institution in charge of test, year, and location of test, and whether test is a field or laboratory evaluation. Describe scoring system, and any test procedure which differs from standard methods proposed by Elgin (1982). Trial data from other test years or locations should be presented whenever available on a separate document as Exhibit D.
 Seeds of the check varieties and germplasm lines listed below can be obtained from the USDA Field Crops Laboratory, Bldg. 001, Rm. 335, BARC-West, Beltsville, MD 20705. Although comparisons with check varieties listed below are preferred, comparisons with any appropriate check variety recommended by Elgin (1982) may be presented.

A. DISEASE RESISTANCE:		VARIETY	SYN. GEN. TESTED	PERCENT RESISTANT PLANTS	NUMBER OF PLANTS TESTED	ASI	ASI LSD .05	INSTITUTION, YEAR, LOCATION, FIELD OR LABORATORY
Anthracnose, Race 1 (<i>Colletotrichum trifolii</i>) (HR)	Application	Syn. 1	66	328	---	% Resis.	LSD (.05) 13	W-L Research, Inc. 1985 Highland, MD
	Arc (R)	Saranac AR	50	310	---			
	Saranac (S)	2	315	---				
	SCORING SYSTEM: % resistance based on survivors							
Anthracnose, Race 2 (<i>Colletotrichum trifolii</i>)	Application							
	Saranac AR (R)							
	Arc (S)							
	SCORING SYSTEM:							
Bacterial Wilt (<i>Corynebacterium insidiosum</i>) (HR)	Application	Syn. 1	62	177	1.5	0.50	W-L Research, Inc. 1985 Highland, MD	
	Vernal (R)	37	185	2.4				
	Narragansett (S)	4	186	4.2				
	SCORING SYSTEM: (0 = no disease, Plants scored 0 and 1 considered resistant on scale of 0-5 5 = dead plant)							
Common Leafspot (<i>Pseudopeziza medicaginis</i>)	Application							
	MSA-CW3AN3 (R)							
	Ranger (S)							
	SCORING SYSTEM:							

10

10. A. PEST RESISTANCE (Continued):

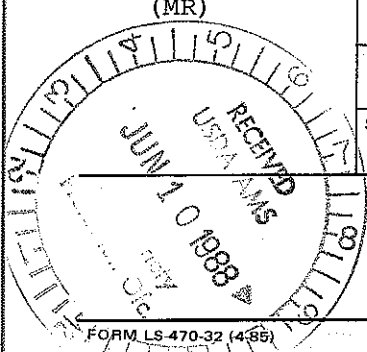
DISEASE	VARIETY	SYN. GEN. TESTED	PERCENT RESISTANT PLANTS	NUMBER OF PLANTS TESTED	ASI	ASI LSD .05	INSTITUTION, YEAR, LOCATION, FIELD OR LABORATORY
Downy Mildew (<i>Peronospora trifoliorum</i>)	Application						
Isolate, if known:	Saranac (R)						
	Kanza (S)						
SCORING SYSTEM:							
Fusarium Wilt (<i>Fusarium oxysporum</i> f. <i>medicaginis</i>)	Application	Syn. 1	69	162	1.25		
(HR)	Mosap (R) Agate (R)		57	174	1.90	0.46	W-L Research, Inc 1985 Highland, MD
	MnGN-1 (S)		16	166	3.94		
SCORING SYSTEM: Plants scored 0-5, with those rated 0 and 1 considered resistant, 5 = plant dead							
Phytophthora Root Rot (<i>Phytophthora megasperma</i> f. <i>medicaginis</i>)	Application	Syn. 1	70	230	---	% Resis.	
(HR)	Agate (R)		44	217	---	LSD (.05)	W-L Research, Inc 1985 Highland, MD
	Saranac (S)		3	226	---	10	
SCORING SYSTEM: % Resistance based on survivors							
Verticillium Wilt (<i>Verticillium alboatrum</i>)	Application	Syn. 1	32	310	3.1		
(R)	Vertus (R)		38	294	2.8	0.4	W-L Research, Inc 1985 Warden, WA
	Saranac (S)		6	299	4.2		
SCORING SYSTEM: Plants scored 1-5; with those rated 1+2 considered resistant, 5 = dead plant							
Other (Specify)	Application						
	(R)						
	(S)						
SCORING SYSTEM:							
Other (Specify)	Application						
	(R)						
	(S)						
SCORING SYSTEM:							
B. INSECT RESISTANCE:	VARIETY	SYN. GEN. TESTED	PERCENT DEFOLIATION	DEFOLIATION IN PERCENT OF RESISTANT CHECK	ASI	ASI LSD .05	INSTITUTION, YEAR, LOCATION, FIELD OR LABORATORY
Alfalfa Weevil (<i>Hypera postica</i>)	Application						
	Arc (R)			100			
	Saranac (S)						
SCORING SYSTEM:							

10. B. INSECT RESISTANCE (Continued):

INSECT	VARIETY	SYN. GEN. TESTED	PERCENT SEEDLING SURVIVAL	NUMBER OF SEEDLINGS TESTED	ASI	ASI LSD .05	INSTITUTION, YEAR, LOCATION, FIELD OR LABORATORY
Blue Alfalfa Aphid (<i>Acyrtosiphon kondoi</i>)	Application						
	CUF 101 (R)						
	PA-1 (S)						
	SCORING SYSTEM:						
Pea Aphid (<i>Acyrtosiphon pisum</i>) (R)	Application	Syn. 1	58	202	2.2	0.5	W-L Research, Inc. 1984 Bakersfield, CA
	Kanza (R)		38	208	2.9		
	Ranger (S)		4	235	4.6		
	SCORING SYSTEM: Plants scored 1-5, 1 + 2's resistant, 5 = dead plant						
Spotted Alfalfa Aphid (<i>Therioaphis maculata</i>) Biotype, if known: (H) (LR)	Application	Syn. 1	9	171	4.2	0.3	W-L Research, Inc. 1984 Bakersfield, CA
	Kanza (R)		36	166	3.0		
	Ranger (S)		0	155	4.9		
	SCORING SYSTEM: Plants scored 1-5; 1 + 2 resistant, 5 = dead.						
INSECT	VARIETY	SYN. GEN. TESTED	PERCENT RESISTANT PLANTS	NUMBER OF PLANTS TESTED	ASI	ASI LSD .05	INSTITUTION, YEAR, LOCATION, FIELD OR LABORATORY
Potato Leafhopper Yellowing (<i>Empoasca fabae</i>)	Application						
	MSA-CW3An3 (R)						
	Ranger (S)						
	SCORING SYSTEM:						
Other (Specify)	Application						
	(R)						
	(S)						
	SCORING SYSTEM:						

C. NEMATODE RESISTANCE:

NEMATODE	VARIETY	SYN. GEN. TESTED	PERCENT RESISTANT PLANTS	NUMBER OF PLANTS TESTED	ASI	ASI LSD .05	INSTITUTION, YEAR, LOCATION, FIELD OR LABORATORY
Northern Root Knot (<i>Meloidogyne hapla</i>) (MR)	Application	Syn. 2	28	222	2.2	0.7	W-L Research, Inc. 1986 Warden, WA
	Nev. Syn. XX (R)		57	203	1.5		
	Lahontan (S)		5	213	3.0		
	SCORING SYSTEM: Plants scored 1-4, 1 = resistant (no galls), 4 = severely galled.						



10. C. NEMATODE RESISTANCE (Continued):

NEMATODE	VARIETY	SYN. GEN. TESTED	PERCENT RESISTANT PLANTS	NUMBER OF PLANTS TESTED	ASI	ASI LSD .05	INSTITUTION, YEAR, LOCATION, FIELD OR LABORATORY
Southern Root Knot (<i>Meloidogyne incognita</i>)	Application						
	Moapa 69 (R)						
	Lahontan (S)						
	SCORING SYSTEM:						
Stem Nematode (<i>Ditylenchus dipsaci</i>) (R)	Application	Syn. 1	43	185	2.8	0.3	W-L Research, Inc. 1985 Warden, WA
	Lahontan (R)		52	194	2.7		
	Ranger (S)		5	206	4.2		
	SCORING SYSTEM: Plants scored 1-5, 1 + 2 = resistant, 5 = dead						
Other (Specify)	Application						
	(R)						
	(S)						
	SCORING SYSTEM:						

11. INDICATE THE VARIETY THAT MOST CLOSELY RESEMBLES THE APPLICATION VARIETY FOR EACH OF THE FOLLOWING CHARACTERS:

CHARACTER	VARIETY	CHARACTER	VARIETY
Winterhardiness	WL 316	Plant Color	WL 316
Recovery After 1st Cut	G-2852	Crown Type	WL 316
Area of Adaptation	WL 316	Combined Disease Resistance	PRO-CUT
Flowering Date	WL 316	Combined Insect Resistance	G-2852

REFERENCES

Barnes, D.K. 1972. A System for Visually Classifying Alfalfa Flower Color. U.S. Dep. Agric. Handb. 424. 18 pp. (Note: Greenish cast of plate 6, A and B is an artifact of printing, actual colors a blend of yellow and white.)

Elgin, J.H., Jr., (ed.). 1982. Standard Tests to Characterize Pest Resistance in Alfalfa Cultivars. U.S. Dep. Agric. Tech. Bull. (In Press).

Gunn, C.R., W.H. Skrdla, and H.C. Spencer. 1978. Classification of *Medicago sativa* L. using legume characters and flower colors. U.S. Dep. Agric. Tech. Bull. 1574. 84 pp.

Munsell Color Co. 1977. Munsell Plant Tissue Color Charts. Munsell Color Co., Inc. Baltimore.

NOTE: Any additional descriptive information and supporting documentation may be provided as Exhibit D.

Exhibit DAdditional Description of Variety

Allstar is a semi-dormant variety that is adapted for use in the northeastern, northcentral, and northwestern U.S. Mid-summer growth is erect with semi-erect fall growth, similar to Saranac. The estimated germplasm source contributions are M. varia - 15%, Turkistan - less than 2%, Flemish - 79%, Chilean - 3%, and a trace of M. falcata and Ladak.

To maintain varietal integrity, foundation seed of Allstar must be produced above 40° N. latitude or in areas where equivalent temperature extremes result from increased elevation. No limitation is placed on areas for certified seed production.

Exhibit EStatement of Applicant's Ownership

Allstar is a proprietary alfalfa variety developed by the plant breeding staff of W-L Research, Inc., a wholly owned subsidiary of Tejon Ranch Co. Allstar is the sole property of W-L Research, Inc., 2000 Oak Street, Bakersfield, CA 93301.

Applications have not been filed for protection of Allstar in any countries other than the United States.